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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 916,484	07 30 2001	Shunpei Yamazaki	740756-2344	8840

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EXAMINER

FOONG, SUK SAN

ART UNIT	PAPER NUMBER
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2823

DATE MAILED: 02 14 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/916,484

Applicant(s)

YAMAZAKI ET AL.

Examiner

Suk-San Foong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) 3, 9, and 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 and 3
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Foreign references not indicated as considered in PTO-1449 file 7/30/01 and 10/19/01 will be considered when parent application file is readily available.

Claim Objections

2. Claims 3, 9, and 15 are objected to because of the following informalities: it appears that "10-12 A" should be replaced by--10⁻¹²A. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. In claims 4, 10, and 16, it is questioned whether the "insulating film including borophosphosilicate glass" is formed on the substrate of its respective claims 1, 7 and 13.

6. In claim 13, it is questioned what is recited through "transmission gate".

Claim Rejections - 35 USC § 103

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7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mase et al. (6,236,064).

Mase et al. teach the process of forming a liquid-crystal electro-optical device comprising a pixel portion and a driving circuit portion that consists of two p-channel or n-channel thin film transistors connected in series, and complementary TFT configuration with at least an n-channel TFT and at least a p-channel TFT. The process includes the formation of silicon oxide film layer over a glass substrate with thickness ranging from 100nm to 300nm (see column 4, lines 39-46), then forming a silicon film and subsequently patterned in the shape of an "island" (see FIG. 5A), then a silicon oxide film is formed as a gate-insulating film, forming a metal layer and then

patterned to form gate electrode, implanting boron into the source and drain regions of p-channel TFTs (see column 6, lines 43-49) or phosphorus into the source and drain regions of n-channel TFTs (see column 6, lines 50-53), anodizing the surface of the gate electrodes to form aluminum oxide, depositing silicon oxide film as an interlayer insulating film (column 7 lines 15-20), and lastly fabricating the conductive interconnects.

Examiner takes Official Notice that the formation of the active layer of the TFT by in-situ doping during deposition was known prior to the applicant's invention.

It would have been obvious to combine the known process with Mase et al.'s process to enable the formation of the active layer of Mase et al.

In view of the disclosure on Instant page 6 line 23-27, the leakage current recited in claim 3 would be obtained for the transistors resulting from the process made obvious by the combination of Mase et al. and the known process because implantation is not employed.

Examiner takes Official Notice that the formation of BPSG as an interlayer insulating film was known prior to the applicant's invention.

It would have been obvious to combine the known process of forming BPSG as an interlayer insulation film with Mase et al.'s process to enable the formation of the necessary interlayer dielectric and electrodes of Mase et al.

Examiner takes Official Notice that the formation of the transmission gate as a part of an active matrix circuit was known prior to the applicant's invention.

It would have been obvious to combine the known process with Mase et al.'s circuit to enable the completion of the active matrix circuit.

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10. Claims 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mase et al. (6,236,064) as applied to claims 1-19 above, and further in view of Takemura (5,581,092). Takemura discloses that NMOS and PMOS TFTs can be used to form CMOS circuits: such as active matrix circuits and peripheral circuits.

It would have been obvious to combine the transmission gate recited in claim 13 with Takemura's circuits to enable the formation of a complete circuit; which is seen to meet the recitation of claim 13 due to the subjectivity associated with "transmission gate" discussed above.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim claims 1, 5, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, and 14 of U.S. Patent No. 6,326,642. Although the conflicting claims are not identical, they are not patentably distinct from each other because

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instant claims 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, and 18 merely recite formation of the device of the claims 1, 5, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, and 14. Also see MPEP 806.04(i).

Conclusion


13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suk-San Foong whose telephone number is 703-305-0383. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 703-308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 (7724, 3431, 3432).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

SF
February 11, 2002


George Fourson
Primary Examiner
Art Unit 2823